App. No. 10/672345
Examiner: C.M. Koslow
Art Unit: 1755

PATENT
HSM&L No. 10873.1308US01

**Amendments to the Claims:**

This Listing of Claims will replace all prior versions and listings of claims in the application. No new matter has been added.

**Listing of Claims:**

1-9 (Canceled)

10. (Previously Amended) An inorganic oxide expressed by a chemical formula III

$$(1-x)MLn_2QR_4O_{12}\cdot xLn_3R_5O_{12} \quad (III)$$

where M is at least one element selected from the group consisting of Mg, Ca, Sr, and Ba, wherein M is 50 atomic % or more of Ba;

Ln is at least one rare earth element selected from the group consisting of Sc, Y, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, and Lu;

Q is at least one element selected from the group consisting of Si, Ge, Sn, and Pb;

R is at least one element selected from the group consisting of B, Al, Ga, In, and Tl; and

x is in a range of $0 \leq x \leq 0.7$.

11-12 (Canceled)

13. (Previously Amended) The inorganic oxide according to claim 10, wherein the range of x is $0 \leq x \leq 0.5$.

14. (Original) The inorganic oxide according to claim 10, wherein the Ln is at least one rare earth element selected from the group consisting of Sc, Y, La and Gd, the Q is at least one element selected from the group consisting of Si and Ge, and the R is at least one element selected from the group consisting of B, Al and Ga.

15. (Original) The inorganic oxide according to claim 14, wherein the majority of the Ln is made up of Y.

16. (Original) The inorganic oxide according to claim 14, wherein the majority of the Q is made up of Si.

17. (Original) The inorganic oxide according to claim 14, wherein the majority of the R is made up of at least one selected from Al and Ga.

18. (Original) The inorganic oxide according to claim 10, wherein the inorganic oxide has a garnet crystal structure.

19. (Original) The inorganic oxide according to claim 10, wherein the inorganic oxide further comprises at least one rare earth element selected from the group consisting of Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb and Lu.

20-23 (Canceled)

24. (Previously Amended) A phosphor having an inorganic oxide expressed by a chemical formula III as a phosphor host or an active component

$$(1-x)MLn_2QR_4O_{12}\cdot xLn_3R_5O_{12} \quad (III)$$

where M is at least one element selected from the group consisting of Mg, Ca, Sr, and Ba, wherein M is 50 atomic % or more of Ba;

Ln is at least one rare earth element selected from the group consisting of Sc, Y, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, and Lu;

Q is at least one element selected from the group consisting of Si, Ge, Sn, and Pb;

R is at least one element selected from the group consisting of B, Al, Ga, In, and Tl; and

x is in a range of $0 \leq x \leq 0.7$.

25. (Original) The phosphor according to claim 24, further comprising at least one selected from the group consisting of $Ce^{3+}$ ions, $Pr^{3+}$ ions, $Eu^{3+}$ ions, and $Tb^{3+}$ ions as a luminescent center of the phosphor.

26. (Currently Amended) An ~~The~~ inorganic oxide ~~according to claim 10,~~ expressed by a chemical formula III below which is a solid solution, in which an inorganic oxide expressed by a chemical formula II below is doped into ~~the~~ an inorganic oxide expressed by the chemical formula I below

$$MLn_2QR_4O_{12} \quad (I)$$

$$Ln_3R_5O_{12} \quad (II)$$

$$(1-x)MLn_2QR_4O_{12}\cdot xLn_3R_5O_{12} \quad (III)$$

where M is at least one element selected from the group consisting of Mg, Ca, Sr, and Ba, wherein M is 50 atomic % or more of Ba;

Ln is at least one rare earth element selected from the group consisting of Sc, Y, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, and Lu;

Q is at least one element selected from the group consisting of Si, Ge, Sn, and Pb; ~~and~~

R is at least one element selected from the group consisting of B, Al and Ga; and

x is in a range of $0 < x \leq 0.98$.

27. (Previously Presented) The inorganic oxide according to claim 26, wherein a ratio of the inorganic oxide expressed by the chemical formula I and the inorganic oxide expressed by the chemical formula II is I : II = 1:99 to 99:1 in weight ratio.

28. (Currently Amended) The inorganic oxide according to claim 26, wherein the majority of a combination of M is ~~mainly~~ made up of Ba and the majority of Q is ~~mainly~~ made up of Si.

29. (Currently Amended) The inorganic oxide according to claim 26, wherein a the majority of the Ln is ~~mainly~~ made up of Y.

30. (Currently Amended) The inorganic oxide according to claim 26, wherein the majority of the R is ~~mainly~~ made up of Al.

31. (Previously Presented) The inorganic oxide according to claim 26, wherein the inorganic oxide further comprises at least one rare earth element selected from the group consisting of Ce, Pr, Eu, Tb.

32. (Previously Presented) The inorganic oxide according to claim 26, further comprising at least one selected from the group consisting of $Ce^{3+}$ ions, $Pr^{3+}$ ions, $Eu^{3+}$ ions, and $Tb^{3+}$ ions as a luminescent center of the phosphor.

33. (Previously Presented) An inorganic oxide expressed by a chemical formula I below

$$MLn_2QR_4O_{12} \quad (I)$$

wherein the inorganic oxide has a hexagonal crystal structure or a perovskite structure,

M is at least one element selected from the group consisting of Mg, Ca, Sr, and Ba;

Ln is at least one rare earth element selected from the group consisting of Sc, Y, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, and Lu;

Q is Si; and

R is B or Al.

34. (Currently Amended) The inorganic oxide according to claim 33, wherein the majority of a combination of the M is ~~mainly~~ made up of Sr or Ba and the majority of the Ln is ~~mainly~~ made up of Y or Gd.

35. (Previously Presented) The inorganic oxide according to claim 33, wherein R is B.

36. (Currently Amended) The inorganic oxide according to claim 33, wherein the majority of the M is ~~mainly~~ made up of Sr and the majority of the Ln is ~~mainly~~ made up of Gd.

37. (Previously Presented) The inorganic oxide according to claim 33, further comprising at least one selected from the group consisting of $Ce^{3+}$ ions, $Pr^{3+}$ ions, $Eu^{3+}$ ions, and $Tb^{3+}$ ions as a luminescent center of the phosphor.